Amendments to the Claims

Please amend the claims to read as follows.

1. (Previously Presented): A micro-chip assembly, which comprises:

first and second alignment elements;

a first substrate comprising a front surface which faces a first direction, the front surface comprising at least one micro-component disposed thereon and at least one depression for mechanically engaging one end of the first alignment element;

a second substrate comprising a front surface which faces the first direction, the front surface comprising at least one micro-component disposed thereon and at least one depression for mechanically engaging one end of the second alignment element, said second substrate a periphery which extends beyond the periphery of said first substrate;

a third substrate comprising first and second depressions disposed thereon for engaging the opposite ends of the first and second alignment elements; wherein said first substrate is disposed between said second substrate and said third substrate; and

whereby said first and second substrates are passively aligned.

2. (Previously Presented): A micro-chip assembly according to claim 1 wherein at least one of said first and second alignment elements is spherical.

3. (Original): A micro-chip assembly according to claim 1 wherein at least one of said first and second alignment elements is a horizontally-disposed cylinder.

4. (Original): A micro-chip assembly according to claim 1 wherein said microcomponents of said first and second front surfaces of said first and second substrates are lenses and optical fibers.

5. (Original): A micro-chip assembly according to claim 1 wherein at least one of said depressions of at least one of said first substrate, said second substrate and said third substrate is defined between two raised surfaces.

6. (Original): A micro-chip assembly according to claim 1 wherein at least one of said depressions of at least one of said first substrate and said second substrate is defined between two raised surfaces.

7. (Previously Presented): A micro-chip assembly, which comprises:

first and second alignment elements;

a first substrate comprising a front surface which faces a first direction, the front surface comprising at least one micro-component disposed thereon and at least one depression for mechanically engaging one end of the first alignment element;

a second substrate comprising a front surface which faces the first direction, the front surface comprising at least one micro-component disposed thereon and at least one depression for mechanically engaging one end of the second alignment element;

wherein said first substrate is disposed above the front surface of the second substrate and said second substrate comprises a periphery which extends beyond said first substrate; and

wherein at least one of said depressions of said second substrate is disposed within the periphery of said second substrate.

8. (Previously Presented): A micro-chip assembly according to claim 7 wherein at least one of said first and second alignment elements is spherical.

9. (Original): A micro-chip assembly according to claim 7 wherein at least one of said first and second alignment elements is a horizontally-disposed cylinder.

10. (Original): A micro-chip assembly according to claim 7 wherein said microcomponents of said first and second front surfaces of said first and second substrates are lenses and optical fibers.

11. (Original): A micro-chip assembly according to claim 7 wherein at least one of said depressions of at least one of said first substrate and said second substrate is defined between two raised surfaces.

12-17. (canceled)

18. (Previously Presented): A method for mechanically aligning micro-components disposed on first and second substrates, comprising the steps of:

providing first and second substrates each comprising micro-components disposed thereon and a front surface comprising at least one depression which faces the same direction;

providing an alignment member comprising:

a first depression for mechanically engaging one end of a first alignment element, said first alignment element comprising an opposite end which engages a recess disposed on the front surface of the first substrate, and

at least one second depression for mechanically engaging one end of a second alignment element, said second alignment element comprising an opposite end which engages a recess disposed on the front surface of the second substrate;

positioning the first and second substrates in stacked relation relative to another such that the front surfaces face the same direction;

positioning the alignment elements within the recesses disposed within the first and second substrates; and

aligning the depressions of the alignment member with the alignment elements such that the periphery of the second substrate extends beyond the first substrate and the micro-components disposed on each of said substrates passively align.

19. (Original): The method according to claim 18 wherein the micro-components align in direct vertical registry.

20. (Original): The method according to claim 18 further comprising the step of:

disengaging said alignment member and said alignment elements with said first and second substrates.

21. (Currently Amended): A method for mechanically aligning micro-components disposed on first and second substrates, comprising the steps of:

providing first and second substrates each comprising at least one micro-component disposed on a front surface that comprises~~ing~~ at least one depression disposed thereon which faces a first direction, said second substrate comprising a periphery which extends beyond said first substrate;

providing an alignment member comprising a first alignment element for mechanically engaging the depression disposed on the front surface of the first substrate and at least one second alignment element for mechanically engaging the depression disposed on the front surface of the second substrate;

positioning the first and second substrates in stacked relation relative to one another such that the front surfaces face said first direction and said periphery of said second substrate extends beyond said first substrate; and

mechanically engaging the first alignment element with the depression disposed on the first substrate and mechanically engaging the second alignment element with the depression disposed on the second substrate such that micro-components disposed on each of said substrates are aligned.

22. (Original): The method according to claim 21 further comprising the step of:

disengaging said alignment member and said alignment elements with the depressions of said first and second substrates.

23. (Canceled)